1) $(\overline{A+B})+\bar{C}+\bar{D}+(\overline{C+B})$
$\bar{A}.\bar{B}+\bar{C}+\bar{D}+\bar{C}.\bar{B}$
$\bar{A}.\bar{B}+\bar{C}.1+\bar{D}+\bar{C}.\bar{B}$
$\bar{A}.\bar{B}+\bar{C}.(1+\bar{B})+\bar{D}$
$\bar{A}.\bar{B}+\bar{C}.1+\bar{D}$
$\bar{A}.\bar{B}+\bar{C}+\bar{D}$

2) $S=ABC+A\bar{B}+A\bar{C}$
$S=A(BC+\bar{B}+\bar{C})$
$S=A(BC+\overline{BC})$
$S=A1$
$S=A$

3) $S=(AB\bar{C})(\bar{A}+\bar{B}+\bar{C})$
$S=AB\bar{C}\bar{A}+AB\bar{C}\bar{B}+AB\bar{C}\bar{C}$
$S=A\bar{A}B\bar{C}+AB\bar{B}\bar{C}+AB\bar{C}\bar{C}$
$S=0+0+AB\bar{C}$
$S=AB\bar{C}$

4) $S=\ \bar{A}B+A\bar{B}+AB$
$S=\ \bar{A}B+A(\bar{B}+B)$
$S=\ \bar{A}B+A1$
$S=\ \bar{A}B+A$
$S=(\bar{A}+A)\,.\,(B+A)$
$S=1\,.\,(B+A)$
$S=B+A$

5) $V=(W+X+Y)(W+\bar{X}+Y)(\bar{Y}+Z)(W+Z)$
$V=\big((W+X+Y)W+(W+X+Y)\bar{X}+(W+X+Y)Y\big)(\bar{Y}+Z)(W+Z)$
$V=(WW+WX+WY)+(\bar{X}W+\bar{X}X+\bar{X}Y)+(YW+YX+YY))(\bar{Y}+Z)(W+Z)$
$V=(W+WX+WY+W\bar{X}+0+\bar{X}Y+WY+XY+Y)(\bar{Y}+Z)(W+Z)$
$V=(W+W(X+\bar{X})+WY+0+Y(\bar{X}+X)+Y)(\bar{Y}+Z)(W+Z)$
$V=(W+W1+WY+Y1+Y)(\bar{Y}+Z)(W+Z)$
$V=(W+W+WY+Y+Y)(\bar{Y}+Z)(W+Z)$
$V=(W+WY+Y)(\bar{Y}+Z)(W+Z)$
$V=(W1+WY+Y)(\bar{Y}+Z)(W+Z)$
$V=(W(1+Y)+Y)(\bar{Y}+Z)(W+Z)$
$V=(W1+Y)(\bar{Y}+Z)(W+Z)$
$V=(W+Y)(\bar{Y}+Z)(W+Z)$
$V=((W+Y)\bar{Y}+(W+Y)Z)(W+Z)$
$V=(W\bar{Y}+Y\bar{Y}+WZ+YZ)(W+Z)$
$V=(W\bar{Y}+0+WZ+YZ)(W+Z)$
$V=(W\bar{Y}+WZ+YZ)(W+Z)$
$V=\big((W+Z)W\bar{Y}+(W+Z)WZ+(W+Z)YZ\big)$
$V=\big((WW\bar{Y}+ZW\bar{Y})+(WWZ+ZWZ)+(WYZ+ZYZ)\big)$
$V=W\bar{Y}+W\bar{Y}Z+WZ+WZ+WYZ+YZ$
$V=W\bar{Y}1+W\bar{Y}Z+WZ+WYZ+1YZ$
$V=W\bar{Y}(1+Z)+WZ+YZ(W+1)$
$V=W\bar{Y}1+WZ+YZ1$
$V=W\bar{Y}+WZ+YZ$

6) $S = \bar{A}B(\overline{D} + D\bar{C}) + (A + \bar{A}CD)B$

$S = \bar{A}B((\overline{D} + D)(\overline{D} + \bar{C})) + ((A + \bar{A})(A + C)(A + D))B$

$S = \bar{A}B(1(\overline{D} + \bar{C})) + (1(A + C)(A + D))B$

$S = \bar{A}B\overline{D} + \bar{A}B\bar{C} + ((AB + CB)(AB + DB))$

$S = \bar{A}B\overline{D} + \bar{A}B\bar{C} + \big((AB + CB)AB + (AB + CB)DB\big)$

$S = \bar{A}B\overline{D} + \bar{A}B\bar{C} + \big((ABAB + CBAB) + (ABDB + CBDB)\big)$

$S = \bar{A}B\overline{D} + \bar{A}B\bar{C} + (AB + CBA + ABD + CBD)$

$S = \bar{A}B\overline{D} + \bar{A}B\bar{C} + (AB1 + CBA + ABD + CBD)$

$S = \bar{A}B\overline{D} + \bar{A}B\bar{C} + (AB(1 + C + D) + CBD)$

$S = \bar{A}B\overline{D} + \bar{A}B\bar{C} + AB1 + CBD$

$S = B(\bar{A}\overline{D} + \bar{A}\bar{C} + A + CD)$

$S = B(\bar{A}\overline{D} + \overline{(A} + A)(\bar{C} + A) + CD)$

$S = B(\bar{A}\overline{D} + 1(\bar{C} + A) + CD)$

$S = B(\bar{A}\overline{D} + \bar{C} + A + CD)$

$S = B(\bar{A}\overline{D} + A + \bar{C} + CD)$

$S = B(\bar{A}\overline{D} + A + (\bar{C} + C)(\bar{C} + D))$

$S = B(\bar{A}\overline{D} + A + 1(\bar{C} + D))$

$S = B(\bar{A}\overline{D} + A + \bar{C} + D)$

$S = B((A + \bar{A})(A + \overline{D}) + \bar{C} + D)$

$S = B(1(A + \overline{D}) + \bar{C} + D)$

$S = B(A + \overline{D} + \bar{C} + D)$

$S = B(D + \overline{D} + \bar{C} + A)$

$S = B(1 + \bar{C} + A)$

$S = B1$

$S = B$